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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,436	12/19/2001	Kazuo Yabe	4105-2	2085

23117 7590 09/07/2005

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EXAMINER	
GRAHAM, ANDREW R	

ART UNIT	PAPER NUMBER
2644	

DATE MAILED: 09/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/021,436	YABE ET AL.	
	Examiner	Art Unit	
	Andrew Graham	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 June 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 June 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The amendments made to the disclosure suffice to overcome the previous grounds of objection. Accordingly, the previous objections to the specification are withdrawn.

2. The amended title of the invention is approved. The previous objection thereto is hereby withdrawn.

Drawings

3. The replacement drawings for Figure 4 were received on 6/15/2005. These drawings are approved and have been entered into the application. The previous objections thereto are hereby withdrawn.

Figures 6 and 7 are objected to, however, because they should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Response to Arguments

4. Applicant's arguments filed 6/15/05 have been fully considered but they are not persuasive.

On page 9, lines 2-4, the applicant has stated in regards to Claim 1 that "Moyski et al. does not disclose how much to attenuate the nominal main volume level and thus certainly does not disclose or suggest attenuating the main volume level to the volume level attenuated by the balance control device". The examiner respectfully disagrees. One of the levels of attenuation taught by Moyski is mute, which, in the given context of either muting or reducing the gain of the audio signals, is equivalent to zero gain (col. 3, lines 56-65). Such a zero gain is one of the possible balance attenuation levels of the applicant's admitted prior art, as is suggested by the left side of curve 102 and right side of curve 100 in Figure 6. Accordingly, muting the audio signal, as taught by Moyski, would involve attenuating the main volume level to the volume level attenuated by the balance control device, so far as represented in the currently submitted claim language, at least when the balance control device has applied the attenuation shown on the respective left and right extremes of the two curves shown in Figure 6 of the applicant's admitted prior art. It is respectfully submitted that the present claim language does not provide distinction otherwise from this condition enabled by the combination of the teachings of the applicant's admitted prior art in view of Moyski.

No further argument regarding Claims 2-9 have been presented. Accordingly, the rejections of these claims, including those that incorporate additional references, have been reviewed and are respectfully maintained herein as is repeated below.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 1-4, 7, and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art in view of Moyski et al (USPN 5185803). Hereafter, "Moyski et al" will be referred to as "Moyski".

Regarding **Claim 1**, the applicant's admitted prior art discloses a conventional acoustic apparatus that is known in the art.

Specifically, the applicant's admitted prior art teaches:

An acoustic apparatus ("car mount acoustic apparatus", page 1, lines 14-15) comprising:

one or more front speakers disposed at front side in a space for outputting a first audio signal (page 1, lines 12-13, 19-20, and 32-34);

one or more rear speakers disposed at rear side in the space for outputting a second audio signal(page 1, lines 13-14 and 19-20; page 2, lines 7-9);

a volume control device for controlling main volume levels of the first audio signal and the second audio signal ("main volume controller", page 1, lines 16-18);

a balance control device (circuitry executing "fader function") attenuating one of a first volume level indicating volume level of the first audio signal and a second volume level indicating volume level of the second audio signal and for maintaining or increasing the other one of the first volume level and the second volume level to be at the main volume level (function shown in Figure 6; page 1, lines 24-34; page 2, lines 1-11), and

a control device (page 2, lines 19-20);

wherein in a state that the balance control device attenuates the one of the first volume level and the second volume level by a predetermined amount from the main volume level ("localized at the front side", page 2, lines 1-4 and 21-23),

when an external audio signal is supplied to the speaker or speakers outputting the audio signal corresponding to the other one of the first volume level and the second volume level which has not been attenuated by the balance control device (in the example, the front speakers; page 1, lines 30-34; page 2, lines 1 and 24-25)

In terms of the control of the rear speaker volume level, the applicant's admitted prior art teaches that the rear speakers are set to the main volume level (page 2, lines 28-31).

The applicant's admitted prior art does not clearly specify:

- that the control device attenuates the main volume level to the one of the first volume level and the second volume level attenuated by the balance control device
- the control device maintains the one of the first volume level and the second volume level at the attenuated main volume level

Moyski teaches a communication system for a vehicle, wherein the volume of the audio system is controlled according to auxiliary sound sources. The system of Moyski provides connections for a microphone input, which is one form of external audio source, to be output through one pair of speakers in a front and rear speaker arrangement (col. 2, lines 29-34).

Specifically regarding **Claim 1**, Moyski teaches:

that the control device (31) attenuates the main volume level (gain of all audio signals from 30) to the one of the first volume level and the second volume level attenuated by the balance control device ('mute' or attenuate gain of outputs from audio source block; col. 3, lines 61-65; such a muted or zero level gain is one of levels enabled by the balance control applicant's admitted prior art, as is shown in the left side of curve 102 or the right side of curve 100 in Figure 6;

accordingly, such muting would meet the requirement of attenuating to a level attenuated 'by the balance control device')

the control device (31) maintains the one of the first volume level and the second volume level at the attenuated main volume level (the applicant's admitted prior art discloses the concept of the rear speaker volume being set to main volume level, page 2, lines 28-31; in light of above attenuation taught by Moyski, such setting of the applicant's admitted prior art would be to an attenuated main volume level).

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to at least mute the main volume level of the system of the applicant's admitted prior art, as is suggested in the teachings of Moyski. The motivation behind such a modification would have been that such main level muting, as suggested by Moyski, would have affected an overall mute volume level for the front and rear speakers of the system of the applicant's admitted prior art, thereby improving the ability of the passengers in positions closest to the front seat speakers to hear the external sound source. The nature of the teachings of Moyski, the muting of the gain of all channels, particularly suggests at least muting of the main volume level applied to each of the speakers. The proposed modification is also suggested by the concept that, in the applicant's admitted prior art, the addition of the second audio source involves

the setting the volume level of the rear speakers equal to the main volume level.

Regarding **Claim 2**, the applicant's admitted prior art particularly teaches:

wherein the other one of the first volume level and the second volume level is attenuated from the main volume level to a minimum level (page 2, lines 15-17; line 106 in Figure 7).

Regarding **Claim 3**, Moyski teaches:

the minimum level comprises a zero level ("mute"; col. 3, line 63).

Regarding **Claim 4**, Moyski teaches:

comprising a mute instruction unit for detecting a mute instruction inputted by a user (user inputs indicate active or inactive communication system; col. 4, lines 11-13; active communication system results in mute, col. 3, lines 61-65),

wherein the control device (31) controls the volume control device to attenuate the volume levels of the audio signals when the mute instruction is detected by the mute instruction unit (col. 3, lines 61-65).

Regarding **Claim 7**, Moyski teaches:

wherein the control device detects a supply of the external audio signal by receiving a signal (user input) indicating the supply of the external audio signal (user input indicates the communication system to be active; col. 4, lines 10-14)

Regarding **Claim 9**, the applicant's admitted prior art in view of Moyski teaches:

the control device attenuates the volume levels of the first and the second audio signals (muted; col. 3, line 63) to the volume level of the other one of the front speaker and the rear speaker to which the external audio signal is not supplied (front and rear gain are muted in the system of Moyski, col. 3, lines 61-65; mute or zero gain is one valid signal level for the applicant's admitted prior art fader control, Figure 6, page 2, lines 1-4).

6. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art as applied above, and in further view of Nicholson et al (USPN 6330337 B1). Hereafter, "Nicholson et al" will be referred to as "Nicholson".

As detailed above, the applicant's admitted prior art discloses a conventional acoustic apparatus that is known in the art. Moyski teaches a communication system for a vehicle, wherein the volume of the audio system is controlled according to auxiliary sound sources. Specifically relevant to Claim 5, Moyski teaches that user inputs applied to the microcontroller (31) are used to control the audio system (30) settings (col. 3, lines 42-44). Moyski also teaches that, upon the application of a microphone signal to the audio output system, the gain of this system is muted (col. 3, lines 61-65). User input in the system of Moyski indicates in the communication system is active (col. 4, lines 11-13)

The system of the applicant's admitted prior art in view of Moyski does not clearly specify:

- the volume control device sets the volume levels of the first audio signal and the second audio signal to the volume levels before the external audio signal is supplied, when supply of the external audio signal ends.

Nicholson teaches an automotive entertainment system that involves different modes of operation for the passenger locations and available audio sources.

Specifically regarding **Claim 5**, Nicholson teaches:

the volume control device sets the volume levels of the first audio signal and the second audio signal to the volume levels before the external audio signal is supplied (settings are stored, col. 5, lines 23-25) when supply of the external audio signal ends (volume settings restored, col. 5, lines 16-19).

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to utilize volume storing and restoring means to store and restore the front and back audio volume settings of the system of the applicant's admitted prior art in view of Moyski, as is suggested by the teachings of Nicholson. The motivation behind such a modification would have been that such storing and restoring means would have enabled the volume settings of the speakers of the applicant's admitted prior art in view of Moyski to be re-applied after the changes in the operation mode of the communication system, such as switching from active to inactive. Such

volume re-application and reverting to inactive mode would have enabled a rear passenger and a driver to enjoy an audio source after communicating with the system of Moyski, as would have been recognized by one of ordinary skill in the art.

7. **Claims 6 and 8** are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art in view of Moyski and Nicholson as applied above, and in further view of Ishikawa (JP 04-162900).

As detailed above, the applicant's admitted prior art discloses a conventional acoustic apparatus that is known in the art. Moyski teaches a communication system for a vehicle, wherein the volume of the audio system is controlled according to auxiliary sound sources. Nicholson teaches an automotive entertainment system that involves different modes of operation for the passenger locations and available audio sources.

The system of Nicholson suggests circuitry which is apply to store, access, and re-apply previously determined sound volumes.

However, the applicant's admitted prior art in view of Moyski and Nicholson does not clearly specify:

a storage unit for storing the volume levels of the first audio signal and the second audio signal before the external audio signal is inputted;

a readout unit for reading out the volume levels stored in the storage unit when the supply of the external audio signal ends and

a changing unit for changing the volume levels of the first audio signal and the

second audio signal to be the volume levels readout by the readout unit.

Ishikawa teaches a balance adjustment device that is able to restore signal volume level to previously determined values. The previously determined values are stored during an intermittent period in which a different audio signal is applied to the speakers.

Specifically regarding **Claim 6**, Ishikawa teaches:

a storage unit (10) for storing the volume levels of the first audio signal and the second audio signal before the external audio signal is inputted ("data just before the test signal period", Constitution);

a readout unit (10) for reading out the volume levels stored in the storage unit when the supply of the external audio signal ends ("fetches" enabled by signal from 13)

a changing unit (6) for changing the volume levels of the first audio signal and the second audio signal to be the volume levels readout by the readout unit (adjustment is applied after data loaded in 10, Constitution).

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to use the particular circuitry disclosed by Ishikawa to implement the mode-based volume controls of the system of the applicant's admitted prior art in view of Moyski and Nicholson. The motivation behind such a modification would have been

the avoidance of undesirable delay in the re-application of the previous balance settings.

Regarding **Claim 8**, Ishikawa teaches the direct monitoring of the intermediate signal (function of trailing edge detection circuit (13), Constitution). In the context of the applicant's admitted prior art in view of Moyski and Nicholson, such an intermediate signal equates to monitoring the microphone signal, which reads on "the controls device detects a supply of the external audio signal by monitoring the external audio signal supplied to the speaker. The motivation behind the use of such a monitoring circuit would have been the resulting capability to reload previous volume settings, thereby avoiding undesirable delays in the output of the stereo or radio signal of the combined system.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Graham whose telephone number is 571-272-7517. The examiner can normally be reached on Monday-Friday, 8:30 AM to 5:00 PM (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VIVIAN CHIN
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ag
August 23, 2005